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Conference Abstract

MIKOKO: A Data Sharing Platform On Kenyan Mangrove Species

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Abstract

The Mangrove ecosystem offers a range of benefits and opportunities for local and national economic development such as fisheries, shoreline stability, and resource sustainability hence they should be protected and conserved.

In Kenya Mangroves were declared government reserve forests by the Proclamation No. 44 of 30th April 1932, and later by Legal Notice No. 174 of 20th May 1964. Under this “Gazette Notification for Mangrove Forests in Kenya” all land between high water and low water marks (ordinary spring tides) are described as mangrove areas. These forests cover about 61,279ha representing approximately 3% of the natural forest cover or less than 1% of the national land area. Mangrove forests are found in tidal estuaries, creeks, and protected bays along the 536 km long Kenyan coastline that extends from the Kenya-Tanzania border in the south to the Kenya-Somalia border in the north; between latitudes 1°40´S and 4°25´S and longitudes 41°34´E and 39°17´E.

Mikoko (Mangrove in Swahili) is the first project specifically developed for mangrove areas in Kenya. Driven by the Kenya Forest Service, the project takes into account the recommendations of the National Mangrove Ecosystem Management Plan 2017-2027. For effective management of mangroves in the country, the Plan is organised around six programmes including; forest conservation and utilization; fisheries development and

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management; community; tourism development; research and education; and human resource and operations. These programmes prescribe measures for rehabilitation, conservation, and sustainable management of mangrove ecosystems in Kenya. Implementations of this Plan will be led by Kenya Forest Service (KFS); but will also include other key actors such as Kenya Wildlife Service, State Department of Fisheries, Research Institutions, Academia and Community Forest Associations through a specially constituted National Mangrove Advisory Committee. The project is for a 2-year period during which it shall develop an effective system for management of mangrove resources in Kenya. This will be done through the development of management prescriptions, skills improvement and provision of adequate infrastructure as recommended by the mangrove plan.

Biodiversity information on mangroves, covering species descriptions and distribution, is essential for understanding the ecology and distribution of this endangered ecosystem and its management. Nowadays, very few is done in that domain. If the mangroves location are well know, it's not the case regarding the species distribution. Citizen science is a way to address this important issue. MIKOKO, a French FSPI funded project, is focused on Kenya to develop species information systems on mangrove species. Mikoko aims to assimilate knowledge through its participatory portal to strengthen a science and technology network of stakeholders such as scientists and parataxonomists in the African region.

The portal platform will contain a Citizen Science module, a graphic driven species identification module, a species pages module conforming to Species Profile Model and a spatial module. Subscribing to open data paradigm, all the data on the portal will be covered by Creative Commons license framework. Mobile applications for identifying 60 plant species and contributing to citizen science module will be deployed. The oral presentation will expose the portal features and related apps seeking participation from the environmentalists from the African region.

Keywords

Mangrove, Kenya, participatory platform, open data

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